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ABSTRACT

The student bodies in 2 Leflore County schools in Mississippi are described and the number of dropouts and the holding power of these rural schools are estimated on the basis of the total enrollment data of each school during the period between 1960 and 1968. It is noted that there are marked differences in the stability indices and holding power of the 2 schools, reflecting the relatively poor status of Negro pupils. Recommendations are given (1) for additional social-worker-type supervision; (2) for improvement of instruction, parental education, general adult education, additional vocational education, increased guidance and counseling services, addition of psychological special services, and special education; (3) for pre-school and kindergarten education; and (4) for a general supervisor of instruction. Tables showing pertinent information are included. This work was prepared under funds from Title III of the Elementary and Secondary Education Act. (AN)

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Volume II

Holding Power and Dropouts

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The Estimated Holding Power and Number of Drop-outs, Leflore County Schools

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The number of drop-outs and holding power of the Amanda Elzy School and of the Leflore County School were estimated on the basis of the total annual enrollment data of each school over the period beginning with the school year 1960-61 and ending with the school year 1967-68. The material presented in this report are annual estimates. They are not precise, but should be of value to those for whom trends in the drop-out rates are of importance.

The typical drop-out study is made on a head-count basis and is concucted after the fact. The typical drop-out makes no effort to have the fact of his action entered in the records of the school. He is much more likely to "fade" and when the school authorities attempt to locate him some time later, it is often difficult to locate him and to determine whether he has severed all school connections or is enrolled in school elsewhere. For these reasons, drop-out studies are always expensive and often inaccurate.

The method employed in making the estimates included in this report is too involved to be fully described in this paper. A full exposition has been furnished the Leflore County schools.

The most important aspects of the method may be briefly summarezed. The causes of pupils leaving a given school may be classified under two headings. The first includes those over which the school has no control, such as net migration, mortality, and permanently disabling diseas and accidents. The effect of this class of factors is expressed as a stability index which will be less than 1.00 if there is a net loss greater than one if there is a net gain. The second

cause is dropping out of school, which means that the pupil is not in attendance and has not graduated from high school. The holding power of the school is defined as the percentage of those estimated to be living in the school service area or elsewhere who have not actually enrolled in school since leaving the school under study. It excludes those who have withdrawn from school because the family has moved, or the child has died or become totally incapacitated.

The method pre-supposes that the school has been a closed system during the period under study. In the case of the two schools under study, they were not completely closed systems because one had an elementary feeder school during certain years and the other received an influx of additional pupils as a result of an administrative decision. In such cases at certain points in the analysis, estimates of the enrollment exclusive of these non-system enroller had to be made. Errors of estimate no doubt occurred.

The method assumes the existence of a constant stability index which can be established on a group that is not affected by drop-out, and having been established will hold for all other segments of the school. The first three grades were selected as the base population because it may be assumed that children wimply do not frop out at these ages. But the younger children tend to have younger parents and in a fluid situation they move more readily than do older families. This differential mobility sometimes necessitates the modifying of the stability indices for school levels above the primary. An iterative process was used in arriving at improved estimates of the stability of these schools.

The method tends to yield conservative estimates of the number of drop-outs and inflated estimates of holding power. It is based on

the tacit assumption that deop-outs do not exist until there is reasonable evidence of their existence. In a reasonably stable community the errors associated with this assumption are mininal. The conditions apparently were so fluid in the Amanda Elzy Community in 1961-62 that no evidence of actual drop-out could be established for pupils in the first nine grades and the data for grades 10-12 are quite probably in serious error. Similar conditions existed in the supporting community of the Leflore County school at a later time.

Throughout the analysis of the enrollments in a specific school there are points at which judgments have to be made. The knowledge that the analyst possesses about the specific events that transpired should enable him to make better decisions and hence estimates. The writer would be pleased to have the errors of the estimates presented in this paper corrected by someone whose knowledge of the local conditions is more specific than his.

The stability indices, the number of drop-outs and the holding power on a year-by-year basis will be presented for each school separately. Each will be discussed briefly.

Amanda Elay School:

The data in Table 1 report the results of the analysis of the annual enrollments in the Amanda Elzy school. The columns in this table have been numbered for convenient reference. They will be discussed section by section.

The stability indices in Column 2 report the percentage relationship of each year's enrollment in grades one, two, and three, combined, to the next year's enrollment in grades.two, three and four combines.

In effect, each is an estimate of the ratio of the number of each year's primary grade pupils who remain in the community to go to school the next year. If the families of the pupils of all ages moved at the same rate, these indices would apply to each and all higher grade groups. The analysis of the fourth, fifth and sixth grade enrollments had to be based on this assumption. It proved untenable and the indices were revised upward before proceeding to the seventh, eighth, and ninth grade group. The index for 1961-62 had to be again revised before analyzing the tenth, eleventh and twelfth grade enrollments.

Table 1

Estimated Stability Indices, Holding Power, and Drop-outs in the Amanda Elzy School, 1960-61 to 1967-68.

	COLUMNS						
1	2	3	4	5	6	7	8
		Grades 4-6		Grades 7-9		Grades 10-12	
School Year	Gr.1-3 Stability	Hold Power	Drop-outs	Hold Power	Drop-outs	Hold Power	Drop-outs
1960-61	78.53	1.00	0	.94	59	.95	24
1961-62	69.11	1.00	0	1.00	0	.97	13
1962-63	86.59	1.00	0	.90	121	.92	37
1963-64	85.92	1.00	0	.90	123	.79	104
1964-65	85.72	1.00	0	.86	169	.78	114
1965-66	85.18	1.00	0	.91	105	.79	115
1966-67	85.48	1.00	0	.89	123	.83	96
1967-68	87.29	1.00	0	.94	70	.94	35

1. The stability indices for all years were revised upward for predicting Junior high school enrollments and the stability index was further raised for predicting high school enrollment in the year 1961-62. For the remaining years, the Junior high school revision of the stability indices was used at the high school level.

The stability indices show that in 1960-61, this school community lost more than 21% of its primary level pupils and in 1961-62 more than 30%. The conditions then stabilized at about a 14% loss each year for the next five years. There was a small increase in the number remaining in 1967-68. The analysis of the intermediate grade enrollment established the fact that the families of the young children were emigrating at higher rates than were the families of older children. The effect of this emigration in the primary grades was to reduce the enrollment from 3128 in 1961-62 to 2039 in 1967-68, and a school was added to the attendance area in the interim. The implications of this population loss should be carefully considered in the planning for this school.

The data in columns 3 and 4 report that the enrollment analyses of the intermediate grades yielded no evidence that children dropped out of school in grades 4,5, or 6. The low stability indices previously discussed may well have covered up some drop-outs, but in the absence of presumptive evidence of drop-out, such children were reported not to exist and the school was reported as holding all pupils who were not removed by emigration, mortality, disease, or accidents.

The analysis of the intermediate grade enrollments produces a second and independent estimate of the holding power at the next grade level, namely grades 7,8, and 9. The two estimates were combined to

yield the working estimate used in the next analysis. These working estimates are reported column two of Table 2. They are all higher, indicating that older children were not leaving the community at rates as high as were the primary level children.

Table 2

Revised Estimates of Stability.
Amanda Elzy School

School Year	First Revision	Second Revision
1960-61	85.21	
1961-62	71.73	77.70
1962-63	90.70	
1963-64	86.90	
1964-65	87.39	
1965-66	87.17	
1966-67	88.47	
1967-68	88.31	

The data in columns 5 and 6 report the holding power and the number of drop-outs at the seventh, eighth and ninth grade level. Excluding the year 1961-62, the school was holding between 86 and 94% of the children who were left after emigration and other mon-controlable factors had taken their toll. Between 1962-63 and 1966-67 the estimated annual number of Junior high school drop-outs ranged from

105 to 169. The year 1967-68 showed a marked improvement, and for technical reasons this estimate may be a bit high. The abnormally low stability indices for 1960-61 and 1961-62 produced what may be a spuriously low estimate for the first year, and an estimate of none at all for the second. Again, the information gained in the analysis of the 1961-62 data for grades 7,8, and 9 was used to re-estimate that year's stability before analyzing the tenth, eleventh and twelfth grade data. This second revision of the 1961-62 index is reported in column 3 of Table 2.

The estimated holding power and number of drop-outs at the senior high level is reported by years in columns 7 and 8 of Table 2. The reader will note that the number of drop-outs was generally smaller year by year at the tenth, eleventh and twelfth grade level than at the Junior high school level. It should also be noted that during most of these years the holding power was lower at the senior than at the Junior high school levels. The reader is again reminded that the estimates for the first two years are very weak, and probably should be disregarded. The estimate for the year 1967-68 is a very hopeful sign, and if confirmed in future years, this school may be said to have reached a real turning point in 1967-68.

Leflore County School:

The data in Table 3 report the estimated stability indices, holding power and number of drop-outs in the Leflore County School. The columns in this Table have been numbered for convenient reference. They will be discussed section by section.

The estimated stability indices are reported in column 2. These were based on enrollments in grades 1,2 and 3 combined and upon enrollments the following uear in grades 2,3 and 4 combined. The indices reported suggest that the conditions in this school community were quite changeable. In fact, the enrollments were quite fluid. There were times at which the school service area was modified for administrative reasons. Even more unsettling were instances scattered through the years and over the grades when small concentrated groups of pupils entered for no obvious reason. Since the number in each grade was relatively small, chance factors which caused a numerically small group to enter or to leave a certain class adversely affected the stability of the total pattern for the year. Stability indices were re-estimated from level to level, but in some of the years the re-estimates could not keep up with the changes.

The data reported in columns 3 and 4, indicate that there probably were drop-outs at the intermediate level before the 1964-65 school year. The reader will note that the largest numbers of drop-outs are associated with the stability indices greater than 100. If these higher stability indices were caused by factors which led to an influx of primary level, but not proportionate numbers of older children into this school, the estimated number of drop-outs is inflated and the estimates of holding power is correspondingly low. But the data indicate that pupils did drop out of school before enrolling in grade seven. There is no evidence of drop-out at this level during the last four years studied.

The analysis of the intermediate grade data produced revised stability estimates. These are reported in Table 4 as the first revised estimates. The full Table is reproduced, but the estimates for only three years were modified.

The data in columns 5 and 6 of Table 3 report the estimates of the annual holding power and number of drop-outs at the Junior High school, grade 7, 8 and 9, level. The data indicate that drop-out occured in 1964-65 and prior years and indicate that there was no evidence of drop-out during the last three years studied. These estimates share the uncertainty expressed above, but are supported by the greater liklihood of pupils dropping at these grades than at lower grades.

The analysis of the enrollments for grades 7-9, afforded another basis for revising the estimates of stability. Those for the last three years, only, were revised and these revisions are reported in column 3 of Table 4.

The estimated holding power and number of drop-outs at the grades 10-12 level are reported in columns 7 and 8 of Table 1. These estimates indicate that drop-out persisted at the senior high school level during the first three years covered by this study, and recurred in 1965-66 and 1966-67. Holding power fluctuated with the number of drop-outs.

In estimating drop-out at this level, a pupil who may have been in attendance all during the twelfth grade, but who was not graduated for academic or other reasons, operationally became a drop-out. This method of treating the data may have inflated the estimates for some years.

In summary, the fluid enrollment conditions in this relatively small school most likely impaired the accuracy of the estimates presented. The data do indicate that the problem of drop-out in this school was real during the early years covered in this report. They also indicate that

the problem has not been particularly since the beginning of the 1964 school year, with the possible exception of 1965-66 and 1966-67 at the senior level.

No general summary will be presented because the conditions with respect to stability, drop-out, and holding power are materially different in the two schools studied.

Table 3

Estimated Stability Indices, Holding Power and Drop-outs in the Leflore County School, 1960-61 to 1967-68

C O L U M N S

School Year	Grade 1-3 Stability	Grades 4-6 Hold Power	Grades 4-6 Drop-outs	Grades 7-9 Hold Power	Grades 7-9 Drop-outs	Grades 10-12 Hold Power	Grades 10-12 Drop-outs
1960-61	106.06	.93	23	.89	30	.75	48
1961-62	98.90	.98	7	.94	17	.84	27
1962-63	101.26	.92	26	.95	13	.97	5
1963-64	93.76	.95	17	.97	8	1.00	0
1964-65	92.20	1.00	0	.99	2	1.00	0
1965-66	89.59	1.00	1	1.00	0	.93	13
1966-67	90.00	1.00	0	1.00	0	.96	7
1967-68	68.76	1.00	0	1.00	0	1.00	0

Table 4

Revised Estimates of Stability.
Leflore County School

School Year	First Revision	Second Revision
1960-61	1.0606	
1961-62	.9890	
1962-63	1.0126	
1963-64	.9376	
1964-65	.9283	
1965-66	.8959	.9198
1966-67	.9193	.9287
1967-68	.7543	.7920